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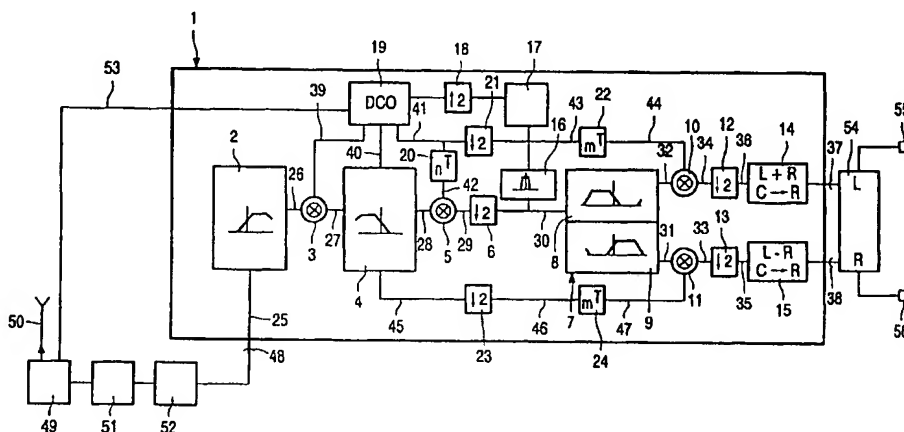
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(54) Title: RECEIVER WITH A SIGNAL PATH



(57) Abstract: The invention relates to a receiver (1, 49, 51, 52, 54) for receiving RF signals. The known receiver comprises a phase-locked loop which is controlled by the stereo pilot. Because of unwanted frequency changes, a sampling rate converter precedes the stereo decoder. Filtering operations within a complex range can be performed by means of the invention.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER IPC 7 H04B1/16		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 H04B		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	EP 1 259 002 A (SONY INTERNAT EUROP GMBH) 20 November 2002 (2002-11-20)	1-10
Y	the whole document	15
Y	EP 0 512 606 A (PHILIPS NV) 11 November 1992 (1992-11-11) abstract; figures 1-4	1-10, 15
Y	US 5 568 206 A (GOECKLER HEINZ) 22 October 1996 (1996-10-22) column 6, line 34 -column 7, line 20; claim 23; figures 1A, 1B, 2B	1-10, 15
A	EP 0 574 273 A (TOSHIBA AVE KK ; TOKYO SHIBAURA ELECTRIC CO (JP)) 15 December 1993 (1993-12-15) column 15, line 28 -column 19, line 1; figures 11-13	1, 15
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<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex.		
* Special categories of cited documents : *A* document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international filing date *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) *O* document referring to an oral disclosure, use, exhibition or other means *P* document published prior to the international filing date but later than the priority date claimed *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. *&* document member of the same patent family		
Date of the actual completion of the international search 30 Apr11 2003		Date of mailing of the international search report 09/05/2003
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nt, Fax: (+31-70) 340-3016		Authorized officer Kolbe, W

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PCT/IB 03/00616

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 602 435 A (ANT NACHRICHTENTECH) 22 June 1994 (1994-06-22) page 2, line 35 -page 3, line 16; figures 1,4 -----	1,15

Form PCT/ISA/210 (continuation of second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

PCT/IB 03/00616

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 1259002	A	20-11-2002	EP 1259002 A1	20-11-2002
			JP 2003051800 A	21-02-2003
			US 2002168030 A1	14-11-2002
EP 0512606	A	11-11-1992	DE 69212214 D1	22-08-1996
			DE 69212214 T2	30-01-1997
			EP 0512606 A2	11-11-1992
			ES 2090482 T3	16-10-1996
			JP 3276392 B2	22-04-2002
			JP 6029938 A	04-02-1994
			KR 242394 B1	01-02-2000
			SG 44895 A1	19-12-1997
			US 5257312 A	26-10-1993
US 5568206	A	22-10-1996	DE 4417723 A1	23-11-1995
			DE 59504861 D1	04-03-1999
			EP 0683607 A2	22-11-1995
EP 0574273	A	15-12-1993	JP 3241098 B2	25-12-2001
			JP 5347736 A	27-12-1993
			CA 2098372 A1	13-12-1993
			DE 69320868 D1	15-10-1998
			DE 69320868 T2	28-01-1999
			EP 0574273 A1	15-12-1993
			KR 9615838 B1	21-11-1996
			US 5418815 A	23-05-1995
EP 0602435	A	22-06-1994	DE 4241965 C1	26-05-1994
			AT 171825 T	15-10-1998
			DE 4244144 C1	26-05-1994
			DE 4309684 A1	29-09-1994
			DE 4310462 A1	06-10-1994
			EP 0602435 A1	22-06-1994
			ES 2121919 T3	16-12-1998